# PHOTONIC Silicon Photodiode, Blue Enhanced Photoconductive DETECTORS INC. Type PDB-C120L



PACKAGE DIMENSIONS INCH [mm] 45 0.50 [12.7] MIN 0.040 0.145 [3.68] 0.189 [4.80] 0.029 [0.74] Ø0.019 [0.48] Ø0.016 [0.41] WIRE BOND DV/////// Ø0.195 [4.95] 0.100 [2.54] Ø0.178 [4.52] ANODE //// CATHODE & CASE PHOTODIODE CHIP Ø0.212 [5.38] Ø0.209 [5.31] LENS CAP 0.025 [0.64] (WELDED) 0.022 [0.56] HEADER 0.027 [0.69] SOLIARE Ø0.012 [Ø0.30] TO-46 HERMETIC CAN PACKAGE ACTIVE AREA ACTIVE AREA =  $0.073 \text{ mm}^2$ 

#### FEATURES

- High speed
- Low capacitance
- Blue enhanced
- Low dark current

# DESCRIPTION

The **PDB-C120L** is a silicon, PIN planar diffused, blue enhanced photodiode. Ideal for high speed photoconductive applications. Packaged in a hermetic TO-46 metal can with a glass lens cap.

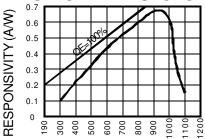
#### **APPLICATIONS**

- Fiber optic
- Laser detection
- Light demodulation
- Matched to I.R. LEDs

### **ABSOLUTE MAXIMUM RATING** (TA=25°C unless otherwise noted)

SYMBOL	PARAMETER	MIN	MAX	UNITS
V <sub>BR</sub>	Reverse Voltage		200	V
T <sub>STG</sub>	Storage Temperature	-65	+150	с
T <sub>o</sub>	Operating Temperature Range	-55	+125	с
T <sub>s</sub>	Soldering Temperature*		+240	°C
Ι <sub>L</sub>	Light Current		500	mA

## SPECTRALRESPONSE



WAVELENGTH(nm)

\*1/16 inch from case for 3 secs max

#### ELECTRO-OPTICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS			
ا <sub>عد</sub>	Short Circuit Current	H = 100 fc, 2850 K	1.2	1.5		μA			
Ι <sub>D</sub>	Dark Current	$H = 0, V_{R} = 10 V$		0.5	2.0	nA			
R <sub>SH</sub>	Shunt Resistance	$H = 0, V_{R} = 10 \text{ mV}$	400	500		MΩ			
TCR <sub>SH</sub>	RSH Temp. Coefficient	$H = 0, V_{R} = 10 \text{ mV}$		-8		% / °C			
CJ	Junction Capacitance	$H = 0, V_{R} = 10 V^{**}$		1		pF			
λrange	Spectral Application Range	Spot Scan	350		1100	nm			
λρ	Spectral Response - Peak	Spot Scan		950		nm			
V <sub>BR</sub>	Breakdown Voltage	I = 10 µµ A	100	150		V			
NEP	Noise Equivalent Power	V <sub>R</sub> = 10 V @ Peak		9.0x10 <sup>-15</sup>		W/ <del>/ Hz</del>			
tr	Response Time	$RL = 1 K\Omega V_R = 50 V$		1.0		nS			

Information in this technical data sheet is believed to be correct and reliable. However, no responsibility is assumed for possible inaccuracies or omission. Specifications are subject to change without notice.\*\*f=1 MHz [FORM NO. 100-PDB-C120L REV A]